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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,453	11/03/2003	Kenichi Soejima	NIT-402	3454

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EXAMINER	
FARROKH, HASHEM	

ART UNIT	PAPER NUMBER
2187	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/698,453	SOEJIMA ET AL.	
	Examiner	Art Unit	
	Hashem Farrokh	2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,8,9,11-19,21 and 22* is/are rejected.

7)☒ Claim(s) *4-7,10 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/3/03,12/8/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The instant application having application No. 10/698,453 has a total of 22 claims pending in the application; there are 4 independent claims and 18 dependent claims, all of which are ready for examination by the examiner.

INFORMATION CONCERNING IDS:

The information disclosure statements (IDSs) submitted on 11/3/03 and 12/8/04 have been considered by the Examiner. The submissions are in compliance with the provisions of 37 CFR 1.97.

INFORMATION CONCERNING CLAIMS:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> *A person shall be entitled to a patent unless –*
>
> *(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

Claims 1-3 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,742,458 to Inoue et al. (hereinafter Inoue).

1. In regard to claim 1, Inoue teaches:

"A storage area management method of a computer system **(element 14 in Fig. 3)** having a storage area **(element 12 in Fig. 3)** to store data," **(e.g., see abstract; column 3, lines 49-62; elements 16-20 in Fig. 2).**

"said method comprising steps of:"

"defining a range in which the data can be arranged (hereinafter the range in which data can be arranged is referred to as the "possible data arrangement range");" **(e.g., see column 3, lines 4-10; element 10 in Fig. 1).** *For example Fig.1 shows that address range of the memory unit 10 arranged into four distinct groups for storing data.*

"defining range information to judge whether or not data to be stored can be arranged in said storage area;" **(e.g., see column 3, lines 11-48; Fig. 1).** *Fig. 1 shows that the memory capacity partitioned in four groups of address ranges which include groups F1-F2 for free access and group Rc for conditional access and group No for restricted access.*

"judging whether or not said possible data arrangement range is within the range indicated by said range information." **(e.g., see column 3, lines 49-68; column 4; Figs. 2-3).** *For example Registers 16 and 26 shown in Fig. 3 contain the range information. The address provided by Data Processor 14 (Fig. 2) is stored in the Address Register 22 (Fig. 3). The access Decision circuits shown in Figs. 2 and/or 3 determine or judge whether the address provided by the processor is within the address ranges designated in the registers.*

"outputting whether or not said possible data arrangement range is within the range indicated by said range information." **(e.g., see column 4, lines 20-50; elements G01 and G02 in Fig. 3).** *For example decision circuits, by comparing the address information provided by the processor with address ranges set in the registers, provide*

the output signal ENABLE if within the address ranges and INHIBIT if outside of the address ranges.

2. *In regard to claim 2, Inoue teaches:*

"designating a range for storing the data;" **(e.g., see column 3, lines 4-10; element 10 in Fig. 1).**

"judging whether or not the range indicated by the said range information of said storage area is within said designated range by referring the range information of said designated range;" **(e.g., see column 3, lines 49-68; column 4; Figs. 2-3).**

"and outputting whether or not the range indicated by the said range information of said storage area is within said designated range." **(e.g., see column 4, lines 20-50; elements G01 and G02 in Fig. 3).**

3. *In regard to claim 3, Inoue teaches:*

"designating a capacity for storing the data;" **(e.g., see column 3, lines 4-10; element 10 in Fig. 1).**

"judging whether or not said storage area has free space equal to or greater than said designated capacity;" **(e.g., see column 3, lines 49-68; column 4; Figs. 2-3).**

"outputting whether or not said storage area has free space equal to or greater than said designated capacity." **(e.g., see column 4, lines 20-50; elements G01 and G02 in Fig. 3).**

4. *In regard to claim 8, Inoue teaches:*

"obtaining a range in which all data in a storage area can be arranged (hereinafter the range is referred to as the "typical range information");" **(e.g., see column 3, lines 4-10; element 10 in Fig. 1).**

"wherein said possible data arrangement range is defined as said typical range information in the step of defining said possible data arrangement range." **(e.g., see column 3, lines 27-28).**

5. *In regard to claim 9, Inoue teaches:*

"wherein, in the step of obtaining said typical range information, the typical range information of a storage area included in said storage area, or, a possible data arrangement range of data in said storage area is obtained in advance **(e.g., see column 3, lines 20-26)**, and a logically narrower area when the typical range information of the storage area included in said storage area is compared with the possible data arrangement range of the data in said storage area **(e.g., see column 4, lines 20-50; elements 28-30 in Fig. 3)**, is designated as the typical range information of said storage area." **(e.g., see column 3, lines 4-19; Figs. 1 and 3).** *Inoue teaches the memory 10 (Fig. 1) arranged in typical address ranges for storing and accessing data. For example Fig. 3 shows the comparator 30 compares the address ranges designated by Register 26 with the address information stored in the Address Register 22.*

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 11-19 and 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,681,303 B1 to Watanabe et al. (hereinafter Watanabe).

6. In regard to claim 11, *Watanabe teaches:*

"A data processing system having a storage device," **(e.g., see column 7, lines 19-21, elements 110, 103, and 120 in Fig. 1).**

"wherein said storage device includes two or more storage areas;" **(e.g., see column 11, lines 6 and 51, elements 103 and 113 in Fig. 1).** *For example Fig 1 shows that the storage devices include logical devices 103 and 113.*

"wherein said data processing system includes the first storage area for which a possible data arrangement range of data stored in said first storage area is defined," **(e.g., see column 9, lines 24-28, elements 311-312 in Fig. 3).** *For example Fig 3 shows the address ranges 312 corresponding to the logical storage devices 311 for the first or primary storage system.*

"and the second storage area for which range information that is to be judged for storing data is defined;" **(e.g., see column 9, lines 24-28, elements 311-312 in Fig. 3).** *For*

example Fig 3 shows the address ranges 312 corresponding to the logical storage devices 311 for the second or backup storage system.

"wherein said data processing system designates said first storage area and said second storage area and judges whether or not said possible data arrangement range of said first storage area is within the range indicated by said range information of said second storage area;" **(e.g., see column 9, lines 64-67; column 10, lines 1-6).**

"and wherein said data processing system outputs whether or not said possible data arrangement range of said first storage area is within the range indicated by said range information of said second storage area." **(e.g., see column 9, lines 64-67; column 10, lines 1-6; column 15, lines 13-33).** *For example the CPU determines whether the address range of second or copy logical is within designated address range and inherently outputs this information by performing a backup or remote copying.*

7. In regard to claim 12, *Watanabe teaches:*

"a management computer for controlling said storage device **(e.g., see elements 101 and 111 in Fig. 1)**, wherein said management computer defines a possible data arrangement range for data in storage areas and a range information of storage areas." **(e.g., see column 1, line 7; column 9, lines 24-28; elements 305 and 308 in Fig. 3).**

8. In regard to claim 13, *Watanabe teaches:*

"a host computer for accessing said storage device **(e.g., see column 7, line 38; element 120 in Fig. 1)**, wherein said host computers judges whether or not said

possible data arrangement range of said first storage area is within the range indicated by said range information of said second storage area, and accesses data of storage areas in said storage devices in accordance with the result of judging;" **(e.g., see column 9, lines 64-67; column 10, lines 1-6; column 15, lines 13-33).**

9. In regard to claim 14, *Watanabe teaches:*

"wherein logical volumes are formed on said volumes." **(e.g., see column 7, lines 22-26; element 104 in Fig. 1).**

10. In regard to claim 15, *Watanabe teaches:*

"wherein file systems are formed on said logical volumes." **(e.g., see column 3, lines 65-67; column 4, lines 1-3).**

11. In regard to claim 16, *Watanabe teaches:*

"wherein a data processing system defines data in a copy-source storage area and a copy-destination storage area;" **(e.g., see column 47, lines 19-30).**

"wherein a data processing system accepts a request to copy the data that is included in said copy-source storage area to said copy-destination storage area from said copy-source storage area;" **(e.g., see column 47, lines 19-30).**

"wherein a data processing system copies said data in said copy-source storage area to said copy-destination storage area judging from the output result of said data

processing system;" **(e.g., see column 9, lines 64-67; column 10, lines 1-6; column 15, lines 13-33; column 47, lines 19-30).**

"wherein said defined possible data arrangement range is designated for data in a copy-source storage area **(e.g., see element 300 in Fig. 3)**, and said defined range information is designated for a copy-destination storage area." **(e.g., see column 10, lines 7-16; element 300 in Fig. 3).**

12. In regard to claim 17, *Watanabe teaches:*

"wherein a data processing system obtains typical range information for a copy-source storage area;" **(e.g., see column 4, lines 64-67**

"and wherein a data processing system defines said possible data arrangement range as said typical range information." **(e.g., see column 8, lines 52-58).** *For example Watanabe logical storage device (e.g., with typical address range) is obtained by dividing of address space of the RAID(S) group by every fixed length.*

13. In regard to claim 18, *Watanabe teaches:*

"wherein a data processing system defines group definition information **(e.g., see column 8, lines 52-58)**, and said possible data arrangement information can be defined by said group definition information." **(e.g., see column 9, lines 24-28; Table 300 in Fig. 3).** *For example Table 300 shows data arrangement information corresponding to logical storage device is defined above.*

14. In regard to claim 19, *Watanabe teaches:*

"A storage device including two or more storage areas;" **(e.g., see column 11, lines 6 and 51, elements 103 and 113 in Fig. 1).**

"wherein said storage device includes the first storage area for which said storage device defines a possible data arrangement range of data stored in said first storage area," **(e.g., see column 9, lines 24-28, elements 311-312 in Fig. 3).**

"and the second storage area for which said storage device defines range information that is to be judged for storing data;" **(e.g., see column 9, lines 24-28, elements 311-312 in Fig. 3).**

"wherein said storage device designates said first storage area and said second storage area **(e.g., element 103 and 113 in Fig. 1)**, and said storage device judges whether or not said possible data arrangement range of said first storage area is within the range indicated by said range information of said second storage area;" **(e.g., see column 9, lines 64-67; column 10, lines 1-6).**

"and wherein said storage device outputs whether or not said possible data arrangement range of said first storage area is within the range indicated by said range information of said second storage area." **(e.g., see column 9, lines 64-67; column 10, lines 1-6; column 15, lines 13-33).**

15. In regard to claim 21, *Watanabe teaches:*

"A data processing system comprising of:" **(e.g., see column 7, lines 57-60).**

"a source storage device which has a volume stored includes a copy-source storage area;" **(e.g., see column 7, lines 57-66; element 104 in Fig. 1).**

"a destination storage device which has a volume stored includes a copy-destination storage area;" **(e.g., see column 7, lines 57-66; element 114 in Fig. 1).**

"wherein said source storage device and said destination storage device is coupled each other through communication devices;" **(e.g., see column 15, lines 18-21; Fig. 1).** *Watanabe teaches that data is transfer between source controller 101 and remote controller 111 through the controller path 160 on the basis of a predetermined protocol. Therefore, there is inherently at least one communication device on each site.*

"wherein said source storage device and said destination device has a memory stored data copy program;" **(e.g., see column 1, lines 5-6; column 7, lines 57-60).**

"wherein the memory of said source storage device is stored possible data arrangement range information for the data in said copy-source storage area and volume range information for said copy-destination storage area;" **(e.g., see column 9, lines 16-38; Fig.3).** *Table 300 shown in Fig. 3 maintains data arrangement range information for each site, which includes* copy-source storage area and volume range information for said copy-destination storage area.

"wherein said destination storage device transmits said volume range information for said copy-destination storage area to said source storage device **(e.g., see column 9, lines 30-32)**, and said source storage device judges whether or not the range indicated by said possible data arrangement range information for the data in said copy-source

storage area is within the range indicated said volume range information for said copy-destination storage area by referring to said possible data arrangement range information stored in said memory;" **(e.g., see column 9, lines 16-38).**

"and wherein said source storage device transmits copy data to said destination storage device in case of judging that the range indicated said volume range information for said copy-destination storage area is within the range indicated by said possible data arrangement range information for the data in said copy-source storage area." **(e.g., see column 1, lines 33-37).**

16. In regard to claim 22, *Watanabe teaches:*

"wherein group definition information is stored in the memory of said source storage device **(e.g., see column 9, lines 39-46, elements 300 in Fig. 3)**, and said possible data arrangement range information can be defined by said group definition information." **(e.g., see column 9, lines 24-28; elements 300 in Fig. 3).** *For example Table 300 in Fig. 3 shows information that includes* data arrangement range information corresponding to logical storage devices.

ALLOWABLE SUBJECT MATTER

Claims 4-7, 10, and 20 are objected to as being dependent upon rejected based claims, but would be allowable if rewritten in correct and independent form including all of the limitations of the base claim and any intervening claims.

1. The primary reason for allowance of claims 4-7 and 10 in instant application is the combination with the inclusion of the following limitations: **copying said data in said copy-source storage area to said copy-destination storage area in accordance with judgment from the result of said outputting step, wherein said defined possible data arrangement range is designated for data in a copy-source storage area, and said defined range information is designated for a copy-destination storage area.**

2. The primary reason for allowance of claim 20 in instant application is the combination with the inclusion of the following limitations: **wherein said storage device judges whether or not said storage area has free space equal to or greater than said designated capacity.**

: IMPORTANT NOTE :

I f the applicant should choose to rewrite the independent claims to include the limitations recited in either one of the claims, the applicant is encouraged to ***amend the title of the invention*** *such that it is descriptive of the invention as claimed as required be sec.* ***606.01*** *of the* ***MPEP****. Furthermore, the* ***summary of invention*** *and the* ***abstract*** *should be amended to bring them into harmony with the allowed claims as required by paragraph 2 of* ***sec. 1302.01*** *of the* ***MPEP****.*

As allowable subject matter has been indicated, applicant's response must either comply with all formal requirements or specifically traverse each requirement not compiled with. See ***37 C.F.R. § 1.111(b)*** *and* ***§ 707.07(a) of the M.P.E.P.***

Conclusion

The prior art made of record and not relied upon are as follows:

1. U. S. Patent Publication No. 2003/0093439 A1 to Mogi et al. describes Method and apparatus for relocating data related to database management system.

2. U. S. Patent No. 2003/0177379 A1 to Hori et al. describes Storing device allowing arbitrary setting of storage region of classified data.

3. U. S. Patent No. 6,748,383 B1 to Wada et al. describes Geographic information indicator, method for displaying geographic information and storage medium for storing program for executing the same.

Any inquiry concerning this communication should be directed to Hashem Farrokh whose telephone number is (571) 272-4193. The examiner can normally be reached Monday-Friday from **8:00 AM to 5:00 PM.**

If attempt to reach the above noted Examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Donald A Sparks, can be reached on (571) 272-4201. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about PAIR system, see http://pair-direct.uspto.gov. Should you have questions on

access to the Private PAIR system, contact the Electronic Business Center (EBS) at 866-217-9197 (toll-free).

HF

HF

2005-08-20

DONALD SPARKS
SUPERVISORY PATENT EXAMINER